*We claim:*

1. A process for fabricating a cavity-type integrated circuit package, comprising:

supporting an interior portion of each of a plurality of leads, in a mold and supporting a die attach pad in said mold;

molding a package body in said mold such that said leads extend from an interior cavity of said package body to an exterior thereof;

mounting a semiconductor die to said die attach pad;

wire bonding various ones of said leads to said semiconductor die;

adding a fill material for covering at least a surface of said interior portion of said leads; and

mounting a lid on said package body for enclosing said die in said cavity of said package body.

2. A process for fabricating a cavity-type integrated circuit package according to claim 1, further comprising cleaning said cavity of said package body, prior to said mounting a lid on said package body.

3. A process for fabricating a cavity-type integrated circuit package according to claim 2, wherein said supporting an interior portion of each of a plurality of leads includes clamping said interior portion of said plurality of leads in a mold cavity.

4. A process for fabricating a cavity-type integrated circuit package according to claim 1, wherein said supporting an interior portion of each of a plurality of leads includes clamping said interior portion of said plurality of leads between a top and a bottom mold.

5. A process for fabricating a cavity-type integrated circuit package according to claim 1, wherein said supporting said die attach pad includes supporting said die attach pad at four corners thereof by tie bars on a leadframe strip.

6. A process for fabricating a cavity-type integrated circuit package according claim 1, wherein said mounting said lid on said package body comprises fixing said lid on said package body with epoxy.

7. A process for fabricating a cavity-type integrated circuit package according to claim 1, further comprising:

mounting a second semiconductor die in a second cavity on a second side of said die attach pad;

wire bonding various ones of said leads to said second semiconductor die; and

adding a second fill material to said second cavity.

8. The process for fabricating a cavity-type integrated circuit package according to claim 7, wherein said second fill material substantially fills said second cavity.

9. The process for fabricating a cavity-type integrated circuit package according to claim 7, further comprising mounting a second lid on said package body for enclosing said second semiconductor die in a second cavity in said package body.

10. A process for fabricating a cavity-type integrated circuit package according to claim 7, wherein said supporting an interior portion of each of a plurality of leads includes clamping said interior portion of said plurality of leads in a mold.

11. A process for fabricating a cavity-type integrated circuit package comprising:

supporting an interior portion of each of a plurality of leads, in a mold and supporting a die attach pad in said mold;

molding a package body in said mold such that said leads extend from an interior of said package body to an exterior thereof;

mounting a first semiconductor die in a first cavity of said package body, to a first side of said die attach pad;

wire bonding various ones of said leads to said first semiconductor die;

adding a fill material to substantially fill said first cavity of said body;

mounting a second semiconductor die in a second cavity of said package body, to a second side of said die attach pad;

wire bonding various ones of said leads to said second semiconductor die;

adding a fill material to said second cavity for covering at least a surface of said interior portion of said leads; and

mounting a lid on said package body for enclosing said second semiconductor die in said second cavity in said package body.

12. A process for fabricating a cavity-type integrated circuit package according to claim 11, wherein said supporting an interior portion of each of a plurality of leads includes clamping said interior portion of said plurality of leads in said mold.

13. A process for fabricating a cavity-type integrated circuit package according to claim 11, wherein said supporting said die attach pad includes supporting said die attach pad at four corners thereof by tie bars on a leadframe strip.

14. A cavity-type integrated circuit package comprising:

a premolded package body;

a plurality of leads, each lead extending from an interior of said package body to an exterior thereof;

a first semiconductor die mounted to a first side of a die attach pad, in a first cavity of said package body;

a first plurality of wire bonds connecting various ones of said leads and said first semiconductor die;

a first fill material substantially filling said first cavity of said package body;

a second semiconductor die mounted to a second side of said die attach pad in said package body;

a second plurality of wire bonds connecting various ones of said leads and said second semiconductor die;

a second fill material covering a portion of said plurality of leads; and

a lid for enclosing said second semiconductor die and said second plurality of wire bonds in said package body.

15. The cavity-type integrated circuit package according to claim 14, wherein said first fill material is the same as said second fill material.